

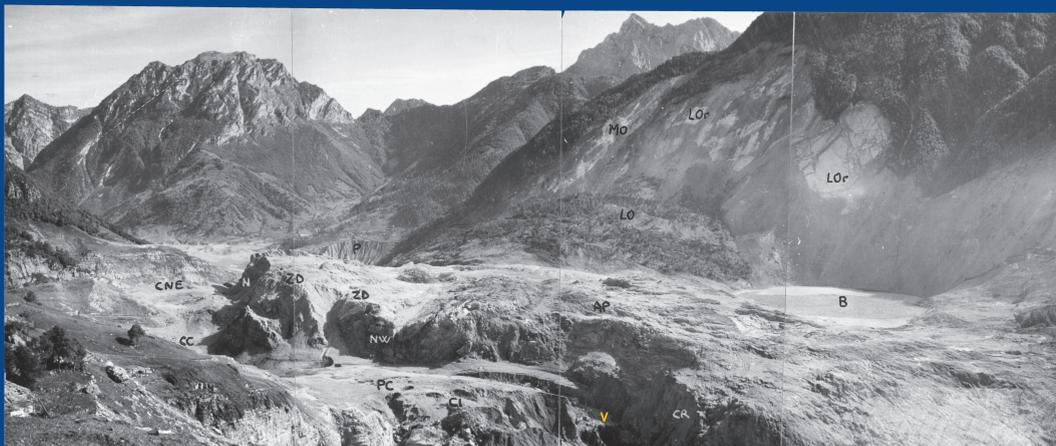
The morning after the landslide of October 9, 1963 - 2

D - The numbers on the landslide

- Volume **270 Mm³**
- Area **~ 2 km²**
- Maximum thickness **330 m**
- Width of the landslide front **1,85 km**
- Horizontal displacement **350-380 m**
- Maximum displacement along the sliding surface **450-500 m**
- Estimated maximum velocity **20-30 m/sec**
- Victims **1910**

31 - Panorama of the landslide from Casso

Photo Edoardo Semenza, 10 October 1963 | from Le foto della frana del Vajont - RS64_1



Panoramic view from the village of Casso of the Eastern Rocky Slabs of the main scarp (LOr), the Internal Lake (B) and the slide mass. Behind the slide mass are the badlands of the Pineda landslide (P). On the left, the North (N) and Northwest (NW) walls of Punta del Toc, separated from the opposite side of the Vaiont Valley by a series of depressions. Colle Isolato (CI), the Northwest Valley (V) and Costa Rossa (CR) lie below the center of the photograph. Apart from its front, the surface of the slide mass has a gentle shape similar to a plateau. On this surface are the eastern and western Debris Blocks (ZD) and the Pozza Plateau (AP). Near the center of the photo, the steep slope delineates the Col Tramontin fault, which is the East Boundary of the landslide (MO). Between it and the Pozza Plateau, the East Lobe of the slide mass (LO) is also visible; it retained, for the most part, its original vegetation cover.

Seismograms at stations within the region registered the landslide and the impact of the wave on the Piave Valley: the rock mass begun fast sliding along Monte Toc slope at 10:39:46 p.m. and came to rest less than one minute later. The wave overtopped the dam at 10:40 p.m. and in approximately 12 minutes destroyed Longarone and other towns in the Piave Valley.

Most of the failed rock mass retained its structure, with little change in shape apart from a general rotation that is evident in the surface morphology. Multiple sliding surfaces were generated within the main mass along the less rigid levels of the formations involved in the movement.

32 - Panorama of the landslide from Casso

Photo Edoardo Semenza, 10 October 1963 | from Le foto della frana del Vajont - RS63_2



One can distinguish almost all the details of the landslide in this panoramic photo. At the lower right are three craters; two more appeared in the following days. At the top are the two parts of the failure surface. Downslope are the two most distal parts of the landslide mass – the two wooded Lobes, LW (western) and LE (eastern) that were not affected by the return flow of water from the displacement wave that completely removed the vegetation from the rest of the slide mass. At the center of the photo is Massalezza Lake (B), which formed at the junction of the eastern and western branches of the Massalezza Stream in the depression created by the back rotation of the slide mass. Water from the displacement wave filled this depression, and the lake persisted for a long time.

At the left, one can see part of the Pineda landslide (P) and the lake upstream of it. NW is the Northwest Wall of the Pian del Toc. ZO is a small mass that began to move with the rest of the slide but then was pushed westward by the principal slide mass and came to rest almost immediately. To the right and below the symbol ZO is the south slope of the valley at the side of the dam, which is composed of east-dipping strata of Vaiont Limestone. Toward the lower left, one can see the alluvial fan (CNW) that formed immediately after the landslide by the part of the wave that flowed out of the valley along the frontal part of the landslide. Just uphill, this water also cut a small channel that is clearly visible on the light-coloured plain underlain by sediment deposited by the last phase of the wave as it sped toward the dam. To the left of this plain is Colle Isolato (CI).

33 - The village of Casso

Photo Edoardo Semenza, 10 October 1963 | from Le foto della frana del Vajont - A_24



The village was not directly hit by the wave, but it was damaged by forceful sprays of water and by rocks that were pushed out in front of the wave. Some rocks broke through the roofs of several houses. The most serious damage was done to the house in the foreground and to the school at the lower right.